

LDWSF
4.4.6
07/26/14



WEEKLY PROGRESS REPORT

PROJECT NO.: 080224-01

REPORT PERIOD: July 20 to July 26, 2014

REPORT NO.: 004

PREPARED BY: Mike Roberts, PE, CCM

PROJECT NAME/LOCATION: Jorgensen Forge Early Action Area Removal Action

Report Submitted to:		Contractor Name and Contact:	
To:	Rebecca Chu, U.S. Environmental Protection Agency	General:	JC Clark, Pacific Pile & Marine, LP
cc:	Gilbert Leon, Earle M. Jorgensen Company	Subconsultant:	TerraSond, Ltd. WaterTechonics
	Miles Dyer, Jorgensen Forge Corporation		
	Amy Essig Desai, Farallon Consulting, LLC		
	Ryan Barth, PE and David Templeton, Anchor QEA, LLC		

CONSTRUCTION OBSERVATIONS		
Day	Date	Description of Field Activity, Observations, and Recommendations to Owner
Sunday	7/20/14	<ul style="list-style-type: none"> No work was conducted today.
Monday	7/21/14	<p>Offshore:</p> <ul style="list-style-type: none"> Conduct dewatering of Toxic Substances Control Act (TSCA) material bins staged on KP3 haul barge. Water pumped directly from the bins into a weir tank located on the water treatment barge. Following dewatering, transported KP3 haul barge downstream to Pacific Pile & Marine, LP (PPM) Transloading Facility in preparation of transloading tomorrow. <p>Upland:</p> <ul style="list-style-type: none"> No unland work conducted today. <p>Water Quality Monitoring:</p> <ul style="list-style-type: none"> No water quality monitoring conducted today. <p>Transloading (JFC Facility):</p> <ul style="list-style-type: none"> No transloading at the JFC Facility conducted today. <p>Transloading (PPM Facility):</p> <ul style="list-style-type: none"> No transloading at the PPM Facility conducted today.
Tuesday	7/22/14	<p>Offshore:</p> <ul style="list-style-type: none"> Began in-water dredging activities in dredge management unit 1 (DMU-1). Approximately 1,200 tons of sediment dredged between 09:41 and 16:00 and placed in KP2 haul barge. Visible standing water was pumped from the KP2 haul barge to the weir tank on the water treatment barge. No discharge from water treatment barge performed. <p>Upland:</p> <ul style="list-style-type: none"> No unland work conducted today. <p>Water Quality Monitoring:</p> <ul style="list-style-type: none"> Water quality monitoring was performed in accordance with the EPA 401 Water Quality Memorandum and the Water Quality Monitoring Plan and coordinated with Erika Hoffman at EPA. The monitoring results are summarized in the "Water, Soil, and Sediment Sampling Observations and Testing Results" section and data are included in Attachment A. <p>Transloading (JFC Facility):</p> <ul style="list-style-type: none"> No transloading at the JFC Facility conducted today. <p>Transloading (PPM Facility):</p> <ul style="list-style-type: none"> Transloaded seven TSCA material bins from KP3 haul barge moored at the PPM





WEEKLY PROGRESS REPORT

PROJECT NO.: 080224-01

REPORT PERIOD: July 20 to July 26, 2014

REPORT NO.: 004

PREPARED BY: Mike Roberts, PE, CCM

PROJECT NAME/LOCATION: Jorgensen Forge Early Action Area Removal Action

CONSTRUCTION OBSERVATIONS		
Day	Date	Description of Field Activity, Observations, and Recommendations to Owner
		Transloading Facility dock directly onto truck chassis followed by trucking to the Union Pacific railway.
Wednesday	7/23/14	<p>Offshore:</p> <ul style="list-style-type: none">Minor amount of water was discharged from the water treatment barge. <p>Upland:</p> <ul style="list-style-type: none">Continued excavation of shoreline bank materials along the southern portion of the excavation limits. <p>Water Quality Monitoring:</p> <ul style="list-style-type: none">The Water Quality monitoring team was ready to monitor, but did not have a chance since the discharge only lasted 15-20 minutes and a monitoring requirement per the Water Quality Monitoring Plan (Appendix E to the Basis of Design Report [BODR]) Section 3.5.1 is that "the first daily monitoring round should be conducted at least 1 hour after the startup of daily work activities." <p>Transloading (JFC Facility):</p> <ul style="list-style-type: none">No transloading at the JFC Facility conducted today. <p>Transloading (PPM Facility):</p> <ul style="list-style-type: none">Transloaded eight TSCA material bins from KP3 haul barge moored at the PPM Transloading Facility dock directly onto truck chassis followed by trucking to the Union Pacific railway.
Thursday	7/24/14	<p>Offshore:</p> <ul style="list-style-type: none">KP2 haul barge transported downstream to the PPM Transloading Facility dock to facilitate transloading into lined trucks and pups Friday. <p>Upland:</p> <ul style="list-style-type: none">Continued excavation of shoreline materials along the southern/central portion of the excavation limits. <p>Water Quality Monitoring:</p> <ul style="list-style-type: none">No water quality monitoring conducted today. <p>Transloading (JFC Facility):</p> <ul style="list-style-type: none">No transloading at the JFC Facility conducted today. <p>Transloading (PPM Facility):</p> <ul style="list-style-type: none">Transloaded final twelve TSCA material bins from KP3 haul barge moored at the PPM Transloading Facility dock directly onto truck chassis followed by trucking to the Union Pacific railway. KP3 haul barge and cable rigging used for transloading decontaminated. KP3 haul barge transported upstream to project site to facilitate in-water dredging on Friday. Decontamination water pumped into a weir tank located on the water treatment barge. No discharge from water treatment barge performed.
Friday	7/25/14	<p>Offshore:</p> <ul style="list-style-type: none">Continued in water dredging activities in DMU-1. Approximately 1,200 tons of sediment dredged between 0735 and 1230 and placed in KP3 haul barge.Continued dewatering and water treatment operations and approximately 141,000 gallons of treated water discharged. <p>Upland:</p> <ul style="list-style-type: none">No upland work conducted today.

same as
713000.
contains extra
page



WEEKLY PROGRESS REPORT

PROJECT NO.: 080224-01

REPORT PERIOD: July 20 to July 26, 2014

REPORT NO.: 004

PREPARED BY: Mike Roberts, PE, CCM

PROJECT NAME/LOCATION: Jorgensen Forge Early Action Area Removal Action

CONSTRUCTION OBSERVATIONS		
Day	Date	Description of Field Activity, Observations, and Recommendations to Owner
		<p>Water Quality Monitoring:</p> <ul style="list-style-type: none">Water quality monitoring was performed in accordance with the EPA 401 Water Quality Memorandum and the Water Quality Monitoring Plan (Appendix E to the BODR) and coordinated with Erika Hoffman at EPA. The monitoring results are summarized in the "Water, Soil, and Sediment Sampling Observations and Testing Results" section of this report and data are included in Attachment A. <p>Transloading (JFC Facility):</p> <ul style="list-style-type: none">Began transloading in-water dredge material from KP3 haul barge moored at the PPM Transloading Facility dock directly into lined truck and pups followed by transport to Waste Management Rail Facility (ASRF). Transloaded approximately 400 tons of material into eleven lined truck and pups.PPM implemented changes in operations at the Transloading area, which included PPM staff covering loads within the transload area (keeping the drivers in the cab of their trucks); and following offloading of the barges, the top rail, scuppers, and other surfaces on the outboard portion of the barges are either cleaned or clear of debris prior to transport. <p>Transloading (PPM Facility):</p> <ul style="list-style-type: none">No transloading at the PPM Facility conducted today.
Saturday	7/26/14	<p>Offshore:</p> <ul style="list-style-type: none">Continued dewatering KP2 haul barge at the project site. No water was discharged. <p>Upland:</p> <ul style="list-style-type: none">No upland work conducted today. <p>Water Quality Monitoring:</p> <ul style="list-style-type: none">No water quality monitoring conducted today. <p>Transloading (JFC Facility):</p> <ul style="list-style-type: none">No transloading at the JFC Facility conducted today. <p>Transloading (PPM Facility):</p> <ul style="list-style-type: none">Approximately 150 tons of shoreline bank debris transloaded from the Upland Stockpile/Storage Area (USSA) into six lined 40 cubic yard containers and transported to the Union Pacific railway.

Health and Safety Observations

- Continued refinement of safety practices of EPA, USACE, and PPM to conform to the site-specific Health and Safety Plan (HASP).
- During TSCA transloading, the use of rubber rain gear in lieu of Tyvek was reviewed and approved by the EPA. The rain gear was proposed due to durability concerns of the Tyvek during rigging operations.
- Daily health and safety tool box talks performed.
- No near misses reported.

Water, Soil, and Sediment Sampling Observations and Testing Results

- Water quality testing was conducted during the dredging and discharge activities, as summarized below. See Attachment A for a summary of water quality monitoring data.



WEEKLY PROGRESS REPORT

PROJECT NO.: 080224-01

REPORT PERIOD: July 20 to July 26, 2014

REPORT NO.: 004

PREPARED BY: Mike Roberts, PE, CCM

PROJECT NAME/LOCATION: Jorgensen Forge Early Action Area Removal Action

Water, Soil, and Sediment Sampling Observations and Testing Results

- One round of monitoring occurred on July 22, 2014 during the first day of in-water dredging. Monitoring occurred between 10:15 am and 12:40 pm. Monitoring results identified and confirmed a turbidity exceedance at the 150C (downriver) station approximately 1.5 hours after low tide. Due to the exceedance, BG and 150C water samples were submitted to the lab for analyses of PCBs and metals. Results should be available Friday afternoon, July 25. Approximately 20-30 minutes after the observed exceedance, additional monitoring identified that turbidity was in compliance. It was also observed that turbidity generated from the exposed shoreline soil (identified on a number of occasions) as the tide was beginning to come back in influenced turbidity readings within 10-15 feet of the shoreline. Discussions with EPA (Erika Hoffman) about this condition concluded that we should avoid monitoring in these areas since the condition is not related to construction activities. Extremely low DO values were detected during the monitoring, which were attributed to a malfunctioning DO membrane. This malfunction is suspected to be due to coating of the membrane by the brown oily substance during monitoring adjacent to the KCIA Outfall #156 discharge location. Dredging was paused for 2 hours to evaluate the extremely low DO values and when dredging reinitiated, the tide was higher. Dredging did not continue long enough for the team to monitor again because of the maintenance needed on the DO probe. The team checked DO readings in the vicinity of the BG station and within the dredging and monitoring area after dredging had stopped for the day and confirmed that the levels were as expected (i.e., between 7 and 9 mg/L). In addition, visual monitoring identified a plume of brown oily substance extending from the KCIA Outfall #156. Although there wasn't a contiguous visible plume from the Outfall to the Jorgensen site, the same brown oily substance was also identified at the Jorgensen site adjacent to the dredge area at the upstream end of the site.
- Two rounds of monitoring occurred on July 25, 2014 during dredging and discharge of treated dredge water, including the treated water from the TSCA material. No water quality issues were identified during the two rounds of monitoring. Water samples from the 150C sample location with the highest turbidity and the BG location at the same depth were submitted for chemistry analysis of PCBs and metals.
- Received preliminary analytical results of sampled sheen collected from surface of waterway on July 19, 2014 outside cofferdam during performane of backfill operations. Minor PAH and PCB detections were obtained. A summary of the unvalidated data is provided as Attachment B.

Anticipated Work for the Next Week

- Continue in-water dredging.
- Continue transloading of in-water sediments from haul barges to lined trucks at PPM Transloading Facility.
- Continue excavation and disposal of shoreline debris (including timber piles and culverts) and soils.
- Weekly progress update construction meeting scheduled for July 30.

Changes and Modifications

- Request for Modification (RFM) 002 approved by EPA on July 26. Modification included loading of debris from the USSA into lined 40 cubic yard modal containers in lieu of lined trucks and pups and disposal at the Columbia Ridge Landfill rather than the Greater Wenatchee Regional Facility landfill. This modification allowed elimination of re-handling the debris at the Waste Management ASRF from trucks and pups to the 40 cubic yard containers and greater environmental protectiveness for the disposed materials.



WEEKLY PROGRESS REPORT

PROJECT NO.: 080224-01

REPORT PERIOD: July 20 to July 26, 2014

REPORT NO.: 004

PREPARED BY: Mike Roberts, PE, CCM

PROJECT NAME/LOCATION: Jorgensen Forge Early Action Area Removal Action

Photographs



Description: Dewatering operations on the KP3 haul barge



Description: Transloading operations of lined TSCA material bins



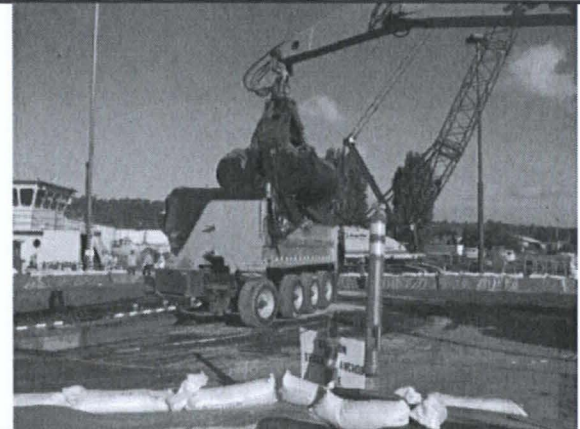
Description: In-water dredging begins in DMU-1



Description: Final TSCA material bin hauled from PPM Transloading Facility



Description: Shoreline bank excavation activities



Description: In-water dredged material transloading at PPM Transloading Facility



WEEKLY PROGRESS REPORT

PROJECT NO.: 080224-01

REPORT PERIOD: July 20 to July 26, 2014

REPORT NO.: 004

PREPARED BY: Mike Roberts, PE, CCM

PROJECT NAME/LOCATION: Jorgensen Forge Early Action Area Removal Action

Photographs



Description: Dredging continues within DMU-1



Description: Transloading of debris from the USSA to lined 40 cubic yard intermodal containers



Description: Outfall plume from King County Outfall #156



Description: Outfall plume from King County Outfall #156

List of Attachments

Attachment A – Water Quality Monitoring Results

Attachment B – Cofferdam Sheen Laboratory Parameter Results

Table 1
Water Quality Monitoring Results for July 22, 2014

Time	Construction Activity	Station Type	Station ID or Location Landmark	Tide	Weather Conditions	Total Water Depth (feet)	Sample Depth (feet from surface)	Water Quality Measurements				Visual Observations			Grab Sample (Y/N)	Sample Name	Comments
								Temp (C) ^a	DO ^{b,c} (mg/L)	pH ^d	Turbidity ^e (NTU)	Odor	Presence of Surface Pollution	Discoloration or Turbidity			
9:13	No Construction Activity On-going	NA	KCIA Outfall #156 plume	Slack	Overcast, cool	--	3	17.95	6.31	6.18	0.8	Stormdrain/garbage/animal waste	Yes, oily sheen and foaming	Yes, visible plume and discoloration	N	--	Water stained surface of WQ meter. Did not take surface grab because of oily sheen on surface. Plume is fairly confined. Photographed outfall and plume, will continue to monitor. First reading is most distant from outfall with decreasing distance.
9:15	No Construction Activity On-going	NA	KCIA Outfall #156 plume	Slack	Overcast, cool	--	1	18.05	7.3	6.78	2.8	Stormdrain/garbage/animal waste	Yes, oily sheen and foaming	Yes, visible plume and discoloration	N	--	
9:19	No Construction Activity On-going	NA	KCIA Outfall #156 plume	Slack	Overcast, cool	--	1	17.65	6.84	7.12	3.8	Stormdrain/garbage/animal waste	Yes, oily sheen and foaming	Yes, visible plume and discoloration	N	--	
10:12	Dredging	BG	BG	Slack	Overcast, cool	9	4.5	17.92	6.46	7.46	2.1	No	No	No	Y	R-BG-UF-M-140722	--
10:30	Dredging	150C	150C-D	Slack	Overcast, rain, cool	8	4	17.05	4.9	7.25	14.2	No	Yes, slight oily sheen	Yes, turbidity	Y	R-150C-DF-M-140722	Shoreward side of the boat; potential exceedance identified; slight oily sheen appears to come from KC Outfall #156
10:30	Dredging	150C	150C-D	Slack	Overcast, rain, cool	8	4	--	3.26	--	5	No	Yes, slight oily sheen	Yes, turbidity	N	--	Open water side of the boat sample taken due to visual observation that turbidity was less on open water side of boat due to shoreline influence; potential exceedance identified; slight oily sheen appears to come from KC Outfall #156
11:00	Dredging	150C	150C-D	Slack	Overcast, rain, cool	8	4.1	17.26	3.5	7.5	33.1	No	Yes, slight oily sheen	Yes, turbidity	N	--	Shoreward side of the boat; confirmed exceedance of turbidity; slight oily sheen appears to come from KC Outfall #156
11:00	Dredging	150C	150C-D	Slack	Overcast, rain, cool	8	4.1	--	3.5	--	10.3	No	Yes, slight oily sheen	Yes, turbidity	N	--	Open water side of the boat; confirmed exceedance of turbidity; slight oily sheen appears to come from KC Outfall #156
11:21	Dredging had just stopped	150C	150C-D	Slack	Overcast, rain, cool	5	2.6	17.29	3.23	7.32	8.2	No	Yes, slight oily sheen	Yes, turbidity	N	--	Shoreward side of the boat; turbidity in compliance; slight oily sheen appears to come from KC Outfall #156
11:24	Dredging had just stopped	150C	150C-D	Slack	Overcast, rain, cool	9	4.5	16.8	2.74	7.43	5.7	No	Yes, slight oily sheen	Yes, turbidity	N	--	Shoreward side of the boat; turbidity in compliance; slight oily sheen appears to come from KC Outfall #156
11:31	No Construction Activity On-going	300C	300C-D	Slack	Overcast, rain, cool	10	5	16.48	3.02	6.82	2.5	No	Yes, slight oily sheen	Yes, turbidity	N	--	Slight oily sheen appears to come from KC Outfall #156
app. 12:00	No Construction Activity On-going	NA	Outfall plume (29 feet from outfall)	Flood	Overcast, rain, cool	9	5	--	3.03	--	5.8	Stormdrain/garbage/animal waste (stronger)	Yes, oily sheen, foam	Yes, visible plume and discoloration	N	--	Investigating exceedance source, samples taken while traveling
app. 12:01	NA	NA	Outfall plume (19 feet from outfall)	Flood	Overcast, rain, cool	3	1	--	5.6	--	9.9	Stormdrain/garbage/animal waste (stronger)	Yes, oily sheen, foam	Yes, visible plume and discoloration	N	--	Investigating exceedance source, samples taken while traveling

Notes:

- a Temperature shall not exceed 16°C. When water temperature is naturally warmer than the criterion (or within 0.3°C of the criterion), actions may not cause the 7-day average of daily maximum temperatures to increase more than 0.3°C. When the natural temperature is cooler than the criterion, the temperature increases must not, at any time, exceed 12/(T-2) as measured at the edge of a mixing zone boundary (where T represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge). Additionally, when the natural temperature of the water is cooler than the criterion, incremental temperature increases resulting from the combined effect of all non-point source activities in the waterbody

Table 1
Water Quality Monitoring Results for July 22, 2014

Time	Construction Activity	Station Type	Station ID or Location Landmark	Tide	Weather Conditions	Total Water Depth (feet)	Sample Depth (feet from surface)	Water Quality Measurements				Visual Observations			Grab Sample (Y/N)	Sample Name	Comments
								Temp (C) ^a	DO ^{b,c} (mg/L)	pH ^d	Turbidity ^e (NTU)	Odor	Presence of Surface Pollution	Discoloration or Turbidity			

- b DO shall not decrease below 6.0 mg/L. When background conditions are near or below 6.0mg/L, human actions may not cause DO to decrease more than 0.2 mg/L, and it should never drop below 3.5 mg/L.
- c DO readings are incorrect (i.e., reading very low values) due to a malfunctioning DO membrane. This malfunction is suspected to be due to coating of the membrane by the brown oily substance during monitoring adjacent to the KCIA Outfall #156 discharge location. Additional DO readings were collected both upstream and downstream of the removal work area and readings were consistently lower than expected. However, after the DO membrane was replaced, DO values within the removal work area were within an expected range (i.e., between 7 and 9 mg/L). These data are not provided in this summary table, but are available upon request.
- d At the point of compliance, pH shall be within the range of 7.0 to 8.5 with a human-caused variation within this range of less than 0.5 unit.
- e Turbidity at the point of compliance shall not exceed 5 NTU over background turbidity when background turbidity is less than 50 NTU, or have more than a 10% increase in turbidity when the background turbidity is greater than 50 NTU. If at any time, turbidity measured at the 150-foot compliance boundary is 59 NTU greater than the measured background turbidity concentration, additional monitoring would be conducted to confirm that measured turbidity at a distance of 800 feet from the construction work area does not exceed 18 NTU over background turbidity concentration. Monitoring at a distance of 800 feet would be conducted every 2 hours for the remainder of the day, or until measured turbidity falls below 18 NTU over background.

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

Table 2
Water Quality Monitoring Results for July 25, 2014

Time	Construction Activity	Station Type	Surface/ Middle/ Bottom	Tide	Weather Conditions	Total Water Depth (ft)	Sample Depth (ft)	Water Quality Measurements				Visual Observations			Chemistry Sample			Comments
								Temp ^b (C°)	DO ^c (mg/L)	pH ^d	Turbidity ^e (NTU)	Odor	Presence of Surface Pollution	Discoloration or Turbidity	Sample Taken (Y/N)	Sample ID	Sample Time	
Monitoring Round 1																		
8:36	Dredging	Background	Surface	Ebb	Clear, warm	12	3	15.47	7.59	7.08	2.9	N	N	N	Y	R-BG-UE-S-140725	8:52	Archive chemistry sample.
8:47	Dredging	Background	Bottom	Ebb	Clear, warm	12	8	15.1	7.59	7.17	5.6	N	N	N	Y	R-BG-UE-B-140725	9:00	Chemistry sample submitted for analysis.
9:06	Dredging/Discharging	150C D	Surface	Ebb	Clear, warm	16	3	15.42	8.51	7.29	3.7	N	N	N	Y	R-150C-DE-S-140725	9:10	Took samples very close between 2 barges to represent downstream 150C and discharge water sampling. Archive chemistry sample.
9:10	Dredging/Discharging	150C D	Bottom	Ebb	Clear, warm	16	12	13.74	6.89	7.38	6.7	N	N	N	Y	R-150C-DE-B-140725	9:15	Took samples very close between 2 barges to represent downstream 150C and discharge water sampling. Chemistry sample submitted for analysis.
9:22	Dredging/Discharging	150C U	Surface	Ebb	Clear, warm	13	3	15.52	8.38	7.51	4.2	N	N	N	Y	R-150C-UE-S-140725	9:25	Archive chemistry sample.
9:24	Dredging/Discharging	150C U	Bottom	Ebb	Clear, warm	13	9	14.83	7.53	7.25	4.4	N	N	N	Y	R-150C-UE-B-140725	9:30	Archive chemistry sample.
10:00	Dredging	300C U	Surface	Ebb	Clear, warm	13	3	--	--	--	--	N	N	N	Y	R-300C-UE-S-140725	10:00	Archive chemistry sample.
10:02	Dredging	300C U	Bottom	Ebb	Clear, warm	13	9	--	--	--	--	N	N	N	Y	R-300C-UE-B-140725	10:02	Archive chemistry sample.
10:10	Dredging	300C D	Middle	Ebb	Clear, warm	5.4	2.7	--	--	--	--	N	N	N	Y	R-300C-DE-M-140725	10:10	Archive chemistry sample.
Monitoring Round 2																		
12:18	No Activity	Background	Surface	Flood	Clear, hot	14	3	16.65	9.05	7.86	2.7	N	N	N	N	--	--	Discharge had not yet begun at time of these readings, retook after discharge of treated water began.
12:19	No Activity	Background	Bottom	Flood	Clear, hot	14	10	15.26	8.31	7.23	4	N	N	N	N	--	--	Discharge had not yet begun at time of these readings, retook after discharge of treated water began.
13:03	Discharging	Background	Surface	Flood	Clear, hot	13	3	16.59	9.33	7.9	3.4	N	N	N	Y	R-BG-UF-S-140725	13:05	Archive chemistry sample.
13:04	Discharging	Background	Bottom	Flood	Clear, hot	13	9	14.75	7.85	7.78	6.1	N	N	N	Y	R-BG-UF-B-140725	13:10	Archive chemistry sample.
13:56	Discharging	150C D	Surface	Flood	Clear, hot	13	3	16.8	8.76	7.72	4.9	N	N	N	Y	R-150C-DF-S-140725	14:00	Archive chemistry sample.
13:56	Discharging	150C D	Bottom	Flood	Clear, hot	13	9	14.82	7.52	7.29	4.4	N	N	N	Y	R-150C-DF-B-140725	14:05	Archive chemistry sample.
14:09	Discharging	150C U	Surface	Flood	Clear, hot	21	3	17.27	8.87	7.63	4.7	N	N	N	Y	R-150C-UF-S-140725	14:15	Archive chemistry sample.

Table 2
Water Quality Monitoring Results for July 25, 2014

Time	Construction Activity	Station Type	Surface/ Middle/ Bottom	Tide	Weather Conditions	Total Water Depth (ft)	Sample Depth (ft)	Water Quality Measurements				Visual Observations			Chemistry Sample			Comments
								Temp ^b (C°)	DO ^c (mg/L)	pH ^d	Turbidity ^e (NTU)	Odor	Presence of Surface Pollution	Discoloration or Turbidity	Sample Taken (Y/N)	Sample ID	Sample Time	
14:10	Discharging	150C U	Bottom	Flood	Clear, hot	21	17	14.38	6.87	7.46	3	N	N	N	Y	R-150C-UF-B-140725	14:20	Archive chemistry sample.
14:30	Discharging	300C D	Surface	Flood	Clear, hot	17	3	--	--	--	--	N	N	N	Y	R-300C-DF-S-140725	14:30	Archive chemistry sample.
14:35	Discharging	300C D	Bottom	Flood	Clear, hot	17	13	--	--	--	--	N	N	N	Y	R-300C-DF-B-140725	14:35	Archive chemistry sample.
14:40	Discharging	300C U	Surface	Flood	Clear, hot	19.2	3	--	--	--	--	N	N	N	Y	R-300C-UF-S-140725	14:40	Archive chemistry sample.
14:44	Discharging	300C U	Bottom	Flood	Clear, hot	19.2	15.2	--	--	--	--	N	N	N	Y	R-300C-UF-B-140725	14:44	Archive chemistry sample.

Latitude/Longitude coordinates in decimal degrees, North American Datum 1983 (NAD83)

Temperature shall not exceed 16°C. When water temperature is naturally warmer than the criterion (or within 0.3°C of the criterion), actions may not cause the 7-day average of daily maximum temperatures to increase more than 0.3°C. When the natural temperature is cooler than the criterion, the temperature increases must not, at any time, exceed 12/(T-2) as measured at the edge of a mixing zone boundary (where T represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge). Additionally, when the natural temperature of the water is cooler than the criterion, incremental temperature increases resulting from the combined effect of all non-point DO shall not decrease below 6.0 mg/L. When background conditions are near or below 6.0mg/L, human actions may not cause DO to decrease more than 0.2 mg/L, and it should never drop below 3.5 mg/L.

At the point of compliance, pH shall be within the range of 7.0 to 8.5 with a human-caused variation within this range of less than 0.5 unit.

Turbidity at the point of compliance shall not exceed 5 NTU over background turbidity when background turbidity is less than 50 NTU, or have more than a 10% increase in turbidity when the background turbidity is greater than 50 NTU. If at any time, turbidity measured at the 150-foot compliance boundary is 59 NTU greater than the measured background turbidity concentration, additional monitoring would be conducted to confirm that measured turbidity at a distance of 800 feet from the construction work area does not exceed 18 NTU over background turbidity concentration. Monitoring at a distance of 800 feet would be conducted every 2 hours for the remainder of the day, or until measured turbidity falls below 18 NTU over background.

Jorgensen Forge Early Action Area Removal Action
Laboratory Parameter Results

Date:	7/24/2014
Date of Sample Collection:	7/19/2014
Construction Activity:	Backfill within Cofferdam
Results Summary:	NA
Type of Assessment:	Sample taken at the request of EPA of water containing a sheen that was observed adjacent to the coffer dam immediately after backfill activities ended and after water had spilled out of the landside wall of the coffer dam.

Parameter	Units	Acute Criterion	Chronic Criterion	Sample Results	
				B-CD-NOR-S_140719	
PCBs	ug/L	10 ^a	0.03 ^a	0.407	
PAHs					
Naphthalene	ug/L	NA	NA	<0.10 U	
2-Methylnaphthalene	ug/L	NA	NA	<0.10 U	
1-Methylnaphthalene	ug/L	NA	NA	<0.10 U	
Acenaphthylene	ug/L	NA	NA	<0.10 U	
Acenaphthene	ug/L	NA	NA	<0.10 U	
Fluorene	ug/L	NA	NA	<0.10 U	
Phenanthrene	ug/L	NA	NA	<0.10 U	
Anthracene	ug/L	NA	NA	<0.10 U	
Fluoranthene	ug/L	NA	NA	0.13	
Pyrene	ug/L	NA	NA	0.11	
Benz(a)anthracene	ug/L	NA	NA	0.07 J	
Chrysene	ug/L	NA	NA	0.08 J	
Benzo(b)fluoranthene	ug/L	NA	NA	0.06 J	
Benzo(k)fluoranthene	ug/L	NA	NA	<0.10 U	
Benzo(a)pyrene	ug/L	NA	NA	0.05	
Indeno(1,2,3-cd)pyrene	ug/L	NA	NA	<0.10 U	
Dibenzo(a,h)anthracene	ug/L	NA	NA	<0.10 U	
Benzo(j)fluoranthene	ug/L	NA	NA	0.04 J	
Benzo(g,h,i)perylene	ug/L	NA	NA	<0.10 U	
Dibenzofuran	ug/L	NA	NA	<0.10 U	

Notes:

^a A 24-hour average not to be exceeded.

U = Non-Detect

J = Estimated

**Jorgensen Forge Early Action Area Removal Action
Laboratory Parameter Results**

Date:	7/31/2014
Date of Sample Collection:	7/22/2014
Construction Activity:	Removal
Results Summary:	No exceedances
Type of Assessment	Instantaneous

Parameter	Units	Acute Criterion	Chronic Criterion	Sample Results	
				R-BG-UF-M-140722	R-150C-DF-M-140722
Total PCBs	ug/L	10 ^b	0.03 ^b	<0.010 U	0.016
Cadmium	ug/L	40 ^c	8.8 ^d	0.5 U	0.5 U
Chromium	ug/L	1100 ^c	50 ^d	2 U	0.6 J
Copper	ug/L	4.8 ^c	3.1 ^d	2 U	1.2 J
Lead	ug/L	210 ^c	8.1 ^d	0.5 U	0.25 J
Mercury	ug/L	1.8 ^c	0.025 ^d	0.02 U	0.02 U
Silver	ug/L	1.9 ^e	---	1 U	1 U
Zinc	ug/L	90 ^c	81 ^d	20 U	6 J

Notes:

- ^a All water quality criteria for trace metals are expressed in terms of the dissolved fraction.
 - ^b A 24-hour average not to be exceeded.
 - ^c A 1-hour average concentration not to be exceeded more than once every three years on the average.
 - ^d A 4-day average concentration not to be exceeded more than once every three years on the average.
 - ^e An instantaneous concentration not to be exceeded at any time.
- U = Indicates that the target analyte was not detected at the reported concentration.
J = Estimated concentration when the value is less than ARI's established reporting limits.